

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims

1. (Canceled)
2. (Currently Amended) A method of setting up a call between first and second nodes of a communication system, said call extending across a circuit switched access network available to the first node and a packet switched backbone network, the networks being interconnected by at least one Media Gateway, the method comprising:
 - 1) sending a call initiation message from the first node to the second node via a control node over a packet switched access network available to the first node;
 - 2) at the control node, obtaining from a Home Subscriber Server the identity of a Media Gateway Control Function controlling that Media Gateway which will terminate the circuit switched call for the first node; and
 - 3) establishing a circuit switched call between the first node and said Media Gateway;
 - 4) sending from the control node to the first node over the packet switched access network, a circuit switched access number associated with the identified Media Gateway Control Function;
 - 5) calling said access number from the first node, and as part of the call set-up procedure communicating the identity of the Media Gateway selected to terminate the call to the Media Gateway Control Function;
 - 6) terminating the circuit switched call at the selected Media Gateway; and
 - 7) sending an update message from the first node to the second node over the packet switched access network, the Media Gateway Control Function incorporating into the update message an IP address of said selected Media Gateway.

3. (Previously Presented) The method according to claim 2, wherein a packet session is established utilizing the Session Initiation Protocol (SIP), and said control node is a Serving Call State Control Function node located within the IP Multimedia Subsystem.

4. (Previously Presented) The method according to claim 3, wherein said call initiation message is a SIP INVITE message.

5. (Previously Presented) The method according to claim 3, wherein said call initiation message is sent from the Serving Call State Control Function node to said second node via the Media Gateway Control Function, following identification of the Media Gateway Control Function by the Serving Call State Control Function.

6. (Previously Presented) The method according to claim 3, wherein said step of sending a circuit switched access number from the control node to said first node includes, following receipt of the call initiation message at the Media Gateway Control Function, sending from the Media Gateway Control Function to said first node, via the Serving Call State Control Function, a SIP message containing the access number.

7. (Previously Presented) The method according to claim 6, said step of calling said access number from the first node being carried out automatically at the first node following receipt at that node of the SIP message.

8. (Previously Presented) The method according to claim 6, wherein said SIP message containing the access number is a SIP REFER message.

9. (Previously Presented) The method according to claim 3, said update message being a SIP UPDATE message.

10. (Previously Presented) The method according to claim 2, wherein both the first and second nodes are attached to respective circuit switched and packet switched access networks, the method comprising carrying out steps 2) to 6) for the second node to establish a circuit switched call at the terminating side between the second node and a Media Gateway selected for that node, and carrying out step 7) to signal to the initiating side the IP address of that Media Gateway.

11. (Previously Presented) The method according to claim 2, wherein said second node has access to only a packet switched access network, and said Media Gateway exchanges packets directly with the second node.

12. (Previously Presented) The method according to claim 2, wherein one or both of the first and second nodes are user terminals.

13. (Previously Presented) The method according to claim 2, wherein said step of identifying a Media Gateway Control Function at the control node comprises receiving from a Home Subscriber Server either the identity of the switch to which the first node is currently attached or the identity of the Media Gateway Control Function associated with that switch..

14. (Previously Presented) The method according to claim 3, wherein the identity information is sent by the Home Subscriber Server automatically following SIP registration of the first node.

15. (Previously Presented) The method according to claim 2, wherein the communications system is a cellular radio communications system.

16. (Previously Presented) The method according to claim 15, wherein the identity is received in response to a query sent to the Home Subscriber Server by the control node, the query being triggered by receipt of the call initiation message.

17. (Previously Presented) The method according to claim 16, wherein the Home Subscriber Server receives Mobile Switching Centre location data for subscribers from a Home Location Register.

18. (Previously Presented) The method according to claim 15, wherein the setting up of the call to the Media Gateway is controlled by a Mobile Switching Centre, the Mobile Switching Centre sending an Initial Address Message to the Media Gateway Control Function and that message containing the identity of the selected Media Gateway.

19. (Previously Presented) A method of operating a Serving Call State Control Function of an IP Multimedia Subsystem to set up a call from a first client terminal to a second client terminal, the method comprising:

receiving a SIP INVITE message from the first client terminal over a packet switched access network, the INVITE being identified as requiring the setting up of a circuit switched call from the first client terminal;

forwarding the SIP INVITE message to a second client terminal;

sending a query to a Home Subscriber Server in order to identify a Media Gateway Control Function which controls that Media Gateway which will be selected to terminate the circuit switched call from the first client terminal;

sending a SIP REFER message from the Serving Call State Control Function to the first client terminal over the packet switched access network, said SIP REFER message including a circuit switched access number associated with the identified Media Gateway Control Function, which sets up the circuit switched call when the client terminal calls the circuit switched access number; and

forwarding a SIP update message received from the first client terminal to the second client terminal over the packet switched access network, wherein the SIP update message includes an IP address of the selected Media Gateway incorporated into the SIP update message by the Media Gateway Control Function.

20. (Currently Amended) A method of operating a Media Gateway Control Function arranged to control a Media Gateway which provides a user plane interface between a circuit switched network and a packet switched backbone network, the method comprising:

receiving a SIP INVITE message from a first client terminal via a Serving Call State Control Function of an IP Multimedia Subsystem, wherein the SIP INVITE message is initiating a call from the first client terminal to a second client terminal;

in response to receipt of said SIP INVITE message, selecting a call back telephone number from a pool of numbers allocated to the Media Gateway Control Function;

sending the selected number to the first client terminal in a SIP message;

answering a subsequent call from the first client terminal to the selected number including receiving the identity of the Media Gateway which will terminate the circuit switched call for the first client terminal as part of the call set-up procedure;

incorporating into a SIP update message an IP address of the selected Media Gateway; and

sending the SIP update message to the Serving Call State Control Function for forwarding to the second client terminal; and

informing the Media Gateway of the IP address of the second client terminal.

21. (New) A method of setting up a call between a first node and a second node in a communication system, wherein the first node has access to both a circuit switched access network and a packet switched access network, and the call is set up across the circuit switched access network and a packet switched backbone network, the networks being interconnected by an originating Media Gateway, the method comprising:

utilizing packet switched signaling to identify the originating Media Gateway and an originating Media Gateway Control Function controlling the originating Media Gateway and to provide a telephone number for the originating Media Gateway Control Function to the first node;

establishing a circuit switched call leg between the first node and the originating Media Gateway Control Function;

 sending an IP address of the originating Media Gateway from the originating Media Gateway Control Function to the second node via a terminating Media Gateway Control Function;

 establishing a packet switched call leg between the originating Media Gateway and the terminating Media Gateway; and

 through-connecting the call to the second node.